APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/066,359	08/18/98	PIRHONEN	R PMS252337T29

TM02/0629	**EXAMINER**
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ART UNIT	PAPER NUMBER
2663	8

DATE MAILED:
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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

	Application No.	Applicant(s)
Office Action Summary	09/066,359	PIRHONEN et al
	Examiner	Art Unit
	Toan Nguyen	2663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ___3___ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _Apr 30, 1998_

2a) ☐ This action is **FINAL.**   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle* 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-18_ is/are pending in the applica

    4a) Of the above, claim(s) _____ is/are withdrawn from considera

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-18_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirem

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

    a)☒ All b) ☐ Some* c) ☐None of:

      1. ☒ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    *See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)

16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)

17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). ___7___

18) ☐ Interview Summary (PTO-413) Paper No(s). _____

19) ☐ Notice of Informal Patent Application (PTO-152)

20) ☐ Other:

Application/Control Number: 09/066,359

Art Unit: 2663

DETAILED ACTION

Priority

1.   Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers

have been placed of record in the file.

Specification

2.   The specification is objected to as failing to provide Abstract of the Disclosure.

Appropriate correction is required.

Content of Specification

(a)   <u>Title of the Invention</u>: See 37 CAR 1.72(a). The title of the invention should be placed at the top of the first page of the specification. It should be brief but technically accurate and descriptive, preferably from two to seven words.

(b)   <u>Cross-References to Related Applications</u>: See 37 CAR 1.78 and MPEP § 201.11.

(c)   <u>Statement Regarding Federally Sponsored Research and Development</u>: See MPEP § 310.

(d)   <u>Reference to a "Microfiche Appendix"</u>: See 37CFR 1.96(c) and MPEP § 608.05. The total number of microfiche and the total number frames should be specified.

(e)   <u>Background of the Invention</u>: The specification should set forth the Background of the Invention in two parts:

     (1)   <u>Field of the Invention</u>: A statement of the field of art to which the invention

pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."

(2) Description of the Related Art: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."

(f) Brief Summary of the Invention: A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.

(g) Brief Description of the Several Views of the Drawing(s): A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.

(h) Detailed Description of the Invention: A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. This item may also be titled "Best Mode for Carrying Out the Invention." Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.

(i) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet. (37 CFR 1.52(b)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps.

(j) Abstract of the Disclosure: A brief narrative of the disclosure as a whole in a single paragraph of 250 words or less on a separate sheet following the claims.

(k)   Drawings: See 37 CFR 1.81, 1.83-1.85, and MPEP § 608.02.

(l)   Sequence Listing: See 37 CFR 1.821-1.825.

Claim Rejections - 35 USC § 112

3.   Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing

to particularly point out and distinctly claim the subject matter which applicant regards as the

invention.

In claim 12, the claim indicated that the claim is dependent of claim 12.

Claim Rejections - 35 U.S.C. § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which form the basis for all obviousness

rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims

under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was

commonly owned at the time any inventions covered therein were made absent any evidence to

the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor

and invention dates of each claim that was not commonly owned at the time a later invention was

made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential

35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

5.   Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Koetje Anno et al (EP 0660558A2).

For claims 1 and 3, Koetje Anno et al disclose interleaving method and apparatus for

digital data transmission in GSM-networks comprises: grouping bit to be transmitted in blocks

having the minimum size of 288 bits (see figure 2, col. 4 lines 46-52), carrying out convolutional

coding for said blocks with a code rate of ½ by using GSM convolutional coding polynomes (see

figure 3, col. 6 line 57 to col. 7 line 38), and puncturing the bits obtained by deleting bits from

each block so that blocks containing no more than 456 bits will be obtained (col. 6 lines 20-56). In

claim 3, Koetje Anno et al disclose further inserting 4 tails bits to the blocks (see figure 3, col. 6

lines 13-19). Koetje Anno et al do not explicitly disclose the size of the blocks. To choose the size

of the blocks would have been obvious to one of ordinary skill in the art in order to achieve the

best transmission results possible.

For claim 2, Koetje Anno et al disclose the block size after the convolutional coding is 584

bits, and that the coded blocks obtained are punctured by deleting 128 bits from each block (col. 6

lines 45-52).

For claim 4, Koetje Anno et al disclose the information to be transmitted is transferred in

the transfer system by generating one frame from two transcoding frames by using a part of

synchronization and control bit positions of the latter frame in the information transfer (see figure

6, col. 7 line 56 to col. 8 line 37).

6.   Claims 5-6, 8-11, and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Koetje Anno et al (EP 0660558A2) in view of Bach et al (U.S. Patent 5,475,686).

For claims 5 and 6, Koetje Anno et al do not disclose the information to be transmitted is transferred in the transfer system by generating a transcoding frame whose first two octets form a synchronization pattern that consists of zeros. Bach et al from the same or similar field of endeavor teach the information to be transmitted is transferred in the transfer system by generating a transcoding frame whose first two octets form a synchronization pattern that consists of zeros (see figure 4, col. 3 lines 36-40). Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention to the combined method and apparatus for transferring data in a communication system as taught by Bach et al in interleaving method and apparatus for digital data transmission in GSM-networks of Koetje Anno et al. The motivation for using the combined method and apparatus for transferring data in a communication system as taught by Bach et al in interleaving method and apparatus for digital data transmission in GSM-networks of Koetje Anno et al being that it requires a minimum number of bits necessary for frame synchronization (col. 3 lines 39-40).

For claim 8, Bach et al disclose the information to be transferred in modified so that the bit sequences comprised by the information differ from the synchronization sequences (col. 2 lines 41-47).

For claim 9, Koetje Anno et al disclose each information bit is inverted prior to the transfer and deinverted after the transfer (see figure 2, col. 4 line 54, and col. 5 lines 43-45).

For claim 10, Koetje Anno et al disclose the information to be transmitted is transfer in the transfer system by generating a transfer frame whose total length is 640 bits and the information transferred by which is applied to a channel coder as two blocks with the length of 290 bits (see figure 2, col. 4 line 46 to col. 5 line 24)

For claim 11, Koetje Anno et al disclose an identifier is inserted to both of the blocks that indicates whether the first or the second block of the frame is in question (see figure 10, col. 10 lines 30-44, and col. 14 lines 51-55).

For claims 17 and 18, Bach et al disclose the transfer frame is generated at a network interworking unit (col. 2 lines 37-47), and the transfer frame comprises a radio link protocol frame (col. 3 lines 16-27).

7.   Claims 7, and 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koetje Anno et al (EP 0660558A2) in view of Kuroda et al (U.S. Patent 5,432,800).

For claim 12, Koetje Anno et al disclose the block identifier is in predetermined position in the block (col. 14 lines 51-55). Koetje Anno et al do not disclose the identifier of the second block is formed by inverting the identifier of the first block. Kuroda et al from the same or similar field of endeavor teach the identifier of the second block is formed by inverting the identifier of the first block (col. 7 lines 56-60). Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention to the combined method and apparatus for transmission and reception of information signals as taught by Kuroda et al in interleaving method and apparatus for digital data transmission in GSM-networks of Koetje Anno et al. The motivation for using the combined method and apparatus for transmission and reception of information signals as taught by Kuroda et al in interleaving method and apparatus for digital data transmission in GSM-networks of Koetje Anno et al being that it provides discriminative identification of the transmitted or received block as to whether it is the data block or the parity block can be made by making use the block synchronizing code affixed at the start of each block, whereby possibility of the parity block being erroneous taken for as the data block in the decoding can positively be

prevented (col. 8 lines 5-12).

For claim 7, Koetje Anno et al in view of Bach et al do not disclose the CRC value thus

obtained is transferred by using spare control bits, and that the CRC value is utilized in

synchronizing the transcoding frame. Kuroda et al disclose the CRC value thus obtained is

transferred by using spare control bits, and that the CRC value is utilized in synchronizing the

transcoding frame (see figure 2, col. 7 lines 6-12, and col. 8 lines 24-38).

For claims 13-16, Kuroda et al disclose the first bits of both frames are used for

transferring supplementary information over the air interface (see figure 4, col. 9 line 65 to col. 10

line 17).

Conclusion

8.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

U.S. Patent 5,432,800 to Kuroda et al, discloses Method And Apparatus For

Transmission And Reception Of Information Signals.

U.S. Patent 5,475,686 to Bach et al, discloses Method And Apparatus For Transferring

Data In A Communication System.

U.S. patent 5,520,480 to Kawai, discloses Digital Transmission System.

U.S. Patent 5,377,192 to Goodings et al, discloses Radio Data Communication System

Having Means For Reducing Collisions Between Contending Remote Stations.

EP 0660558A2 to Koetje Anno et al, discloses Interleaving Method And Apparatus For

Digital Data Transmission In GSM-networks.

Contact Information

9.   Any response to this action should be mailed to:

Assistant Commissioner for Patents
Washington, D.C. 20231
or faxed to:
        (703) 308-9051 or (703) 308-9052 (for formal communications intended for entry)
        (703) 306-5406 (for informal or draft communications, please label "PROPOSED" or
        "DRAFT")
10.   Hand-delivered responses should be brought to Crystal Park II,
        2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).
11.   Any inquiry concerning this communication or early communications should be directed to
Toan Nguyen whose telephone number is (703) 305-0140. He can be reached Monday through
Friday from 7:00am to 4:30pm.
        If attempts to teach the examiner by telephone are unsuccessful, the examiner's
supervisor, Mr. Chau Nguyen, can be reached at (703) 308-5340. The fax phone number for this
Group is (703)-872-9314.
        Any inquiry of a general nature or relating to the status of this application should be direct
to the Group receptionist whose telephone number is (703) 305-9600.

T.N.

DANG TON
PRIMARY EXAMINER